REMARKS

Entry of this response and reconsideration and allowance of the above-identified patent application are respectfully requested. Claims 1-13 and 18 stand rejected in the office action. Claims 14-17 and 19-29 previously have been withdrawn. No claims have been amended, canceled or added. Therefore, following entry of the present response, claims 1-13 and 18 will remain pending in the present application.

Formal drawings were submitted with the response filed on March 24, 2006. Examiner is respectfully requested to acknowledge receipt and acceptance of the drawings as formal.

Claims 1-2, 4, 7-13 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,457,621 to Munday *et al.* ("Munday") in view of U.S. Patent No. 5,457,621 to Aihara *et al.* ("Aihara") and U.S. Patent No. 4,638,245 to MacPhee *et al.* ("MacPhee"). The office action suggests that while Munday does not disclose "the DC bias voltage maintain[ing] the AC voltage above a predetermined voltage level acceptable to the power supply," Aihara in combination with MacPhee does.

In particular, with respect to Aihara, the office action suggests that Aihara's Figure 1 teaches a "power supply Vi [that] has ac voltage source on which a dc bias voltage of an appropriate value is superimposed." (*Office Action dated September 7, 2006* at p. 3). Also, the office action suggests that MacPhee "discloses an apparatus for detecting a ground fault in an underground DC power supply." (*Office Action dated September 7, 2006* at p. 3). Therefore, according to the office action, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Munday with suggestion of Aihara and teaching of MacPhee for detecting a ground fault in the power supply. " (*Office Action dated September 7, 2006* at p. 3). With all due respect to the contentions in the office action, applicants respectfully disagree.

Neither MacPhee nor Aihara teaches or even suggests application of their principles in an electrical power meter context, as contemplated by the present claims. Therefore, the office action's assertion of obviousness amounts to nothing more than impermissible hindsight using the applicants' own invention. While assuming that impermissible hindsight reconstruction may lead to such a construction, 35 U.S.C. § 103 requires a higher standard.

35 U.S.C. § 103 requires a specific suggestion or motivation suggested in the prior art to modify the reference or to combine reference teachings. *MPEP 2143*.

Aihara merely teaches that which is well known to those skilled in the art; namely, that it is well known that diodes may be used to bias AC voltages. However, Aihara does not teach biasing of an AC voltage in an electrical power meter in order to maintain the AC voltage above a predetermined voltage level acceptable to a power supply. In fact, Aihara has nothing to do with an electrical power meter at all. Instead, Aihara teaches using a diode in a wholly different environment, a negative resistance network. As described throughout Aihara, a negative resistance network is a circuit where current decreases as voltage increases. A negative resistance network is a specific type of circuit that has nothing to do with the claimed embodiments.

Similarly, MacPhee does not teach or even suggest application in an electrical power meter context. This is expressly acknowledged in the office action, where it notes that MacPhee is used "for detecting a ground fault." Applicants may not disagree with this characterization of MacPhee, but again this has nothing to do with an electrical power meter. In fact, quite the contrary, MacPhee discusses detection of ground faults in a specific type of large system; namely, ungrounded DC power supply systems.

An ungrounded DC power supply system is a large power distribution system in which DC power is supplied through positive and negative lines to various loads. As MacPhee describes, and as is well-known to those skilled in the art, DC power distribution systems are used in industry for certain purposes. For example, DC power distribution systems are use where speed control of motors is desired such as in steel mills and rolling mills. (*MacPhee* – column 1, lines 10-15). To avoid shutting down such operations if a ground fault occurs, the DC power supply system is usually operated ungrounded so that the first ground fault occurring has no effect other than to convert the system to a grounded system, thus removing the advantages of the ungrounded mode. (*MacPhee* – column 1, lines 16-20).

As the office action correctly notes, MacPhee "detect[s] a ground fault." However, this feature is not recited in the claimed embodiments. Moreover, the context in which MacPhee operates, a DC power supply system, has nothing to do with the claimed embodiments.

If the combination of Munday, MacPhee and Aihara is allowed to stand, carried to its logical conclusion, this will prevent anyone from ever receiving patent protection over novel circuit modifications in an electrical meter, simply because similar components may have been used in another completely different device and for a different purpose. This cannot be the case.

Accordingly, applicant respectfully requests withdrawal of the rejection of claims 1-2, 4, 7-13 and 18 under 35 U.S.C. § 103 (a) over Munday, Aihara and MacPhee.

Finally, claims 3 and 5-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Munday, Aihara and MacPhee. For the same reasons as discussed above, applicant respectfully requests withdrawal of the rejection of claims 3 and 5-6 under 35 U.S.C. § 103(a) over Munday, Aihara and MacPhee.

CONCLUSION

In view of the foregoing, applicant respectfully submits that the claims are allowable and that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Vincent J. Roccia at (215) 564-8946, to discuss resolution of any remaining issues.

Date: December 21, 2006

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